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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,874	09/08/2003	Vanita Mani	RD29557-4	2063

6147 7590 06/29/2006
GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER

STINSON, FRANKIE L

ART UNIT PAPER NUMBER

1746

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,874

Applicant(s)

MANI ET AL.

Examiner

FRANKIE L. STINSON

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13, 15-20, 22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 15-20, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1746

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13, 15-20, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oles (U. S. Pat. No. 3,246,493), Takeda (U. S. Pat. No. 4,813,247) or Severns et al. (U.S. Pat. No. 6,691,536) in view of France et al. (U. S. Pat. No. 6,840,069).

Re claim 13, Oles, Takeda and Severns are all cited disclosing an article cleaning apparatus comprising:

- an air management mechanism (90 in Oles, 9 in Takeda and 31 in Severns);
- a cleaning basket assembly;
- a fluid regeneration device (82, 36, 50 in Oles, 3, 4, ,5 in Takeda and 15 in Severns);
- a working fluid device (72 in Oles, 31 in Takeda and 8 in Severns) coupled to said fluid regeneration device, said cleaning basket assembly, and said air management mechanism, a clean fluid device coupled to said cleaning basket assembly and said fluid regeneration device;
- a controller (see fig. 2 in Oles, see col. 5, lines 23-28 in Takeda and 81 in Severns) coupled to said air management mechanism, said cleaning basket assembly, said working fluid device, said regeneration device, and said clean fluid device; wherein said controller is configured to control a cleaning process, including at least a solvent cleaning process, wherein said solvent cleaning process utilizes a solvent based

Art Unit: 1746

cleaning fluid that differs from the claim only in the recitation of the solvent comprising cyclic siloxane solvent; a solvent vapor sensor coupled to the controller and a spectroscopic solvent vapor sensor coupled to the controller for identifying siloxane vapor, wherein the sensor comprises an infrared source the generate infrared radiation and an infrared sensor adapted to be selectively responsive to infrared radiation having wavelengths in the near or mid-infrared range. The patent to France is cited disclosing a solvent cleaning process, wherein said solvent cleaning process utilizes a solvent based cleaning fluid comprising a cyclic siloxane solvent (see col.5, lines 48-60); and a solvent/chemical specific vapor sensor coupled to the controller to determine amounts (concentration) of solvent vapor that may flow during said solvent cleaning process (see abstract). France further discloses the infrared source/sensor (col. 9, lines 47-54) It therefore would have been obvious to one having ordinary skill in the art to modify the device of either Oles, Takeda or Severns, to include a vapor/gas sensor as taught by France, for the purpose of preventing prolong processing of the article by processing the article only for the needed time thereby realizing cost and energy effectiveness. It is also old and well known in the art to provide cleaning fluid vapor sensors to detect any leakage of the vapor into the environment, thereby preventing injury to the user and/or the environment. Re claims 22 and 23, no patentable distinction is deemed to exist between the wavelength range of wavelength as claimed and that as disclosed by France ("characteristic wavelength", col. 9, line 52). Re claim 15, Oles, Takeda and Severns are all cited disclosing an article cleaning apparatus comprising:

an air management mechanism (90 in Oles, 9 in Takeda and 31 in Severns);

Art Unit: 1746

a cleaning basket assembly;
a fluid regeneration device (82, 36, 50 in Oles, 3, 4, 5 in Takeda and 15 in Severns);
a working fluid device (72 in Oles, 31 in Takeda and 8 in Severns) coupled to said fluid regeneration device, said cleaning basket assembly, and said air management mechanism, a clean fluid device coupled to said cleaning basket assembly and said fluid regeneration device;

a controller (see fig. 2 in Oles, see col. 5, lines 23-28 in Takeda and 81 in Severns) coupled to said air management mechanism, said cleaning basket assembly, said working fluid device, said regeneration device, and said clean fluid device; wherein said controller is configured to control a cleaning process, including at least a solvent cleaning process, wherein said solvent cleaning process utilizes a solvent based cleaning fluid that differs from the claim only in the recitation of the piezo-based solvent vapor coupled to the controller for identifying siloxane vapor, wherein the sensor comprises a quartz crystal microbalance element including a transducer film that selectively absorbs the siloxane vapor. France further discloses the piezo-based vapor sensor comprising a quartz crystal microbalance element and transducer film (col. 10, lines 23-38). It therefore would have been obvious to one having ordinary skill in the art to modify the device of either Oles, Takeda or Severns, to include a vapor/gas sensor as taught by France, for the purpose of preventing prolong processing of the article by processing the article only for the needed time thereby realizing cost and energy effectiveness. It is also old and well known in the art to provide cleaning fluid vapor sensors to detect any leakage of the vapor into the environment, thereby preventing

Art Unit: 1746

injury to the user and/or the environment. Re claims 16 and 17, France discloses the transducer film material (polymers). Re claim 18, Oles, Takeda and Severns are all cited disclosing an article cleaning apparatus comprising:

- an air management mechanism (90 in Oles, 9 in Takeda and 31 in Severns);

- a cleaning basket assembly;

- a fluid regeneration device (82, 36, 50 in Oles, 3, 4, 5 in Takeda and 15 in Severns);

- a working fluid device (72 in Oles, 31 in Takeda and 8 in Severns) coupled to said fluid regeneration device, said cleaning basket assembly, and said air management mechanism, a clean fluid device coupled to said cleaning basket assembly and said fluid regeneration device;

- a controller (see fig. 2 in Oles, see col. 5, lines 23-28 in Takeda and 81 in Severns) coupled to said air management mechanism, said cleaning basket assembly, said working fluid device, said regeneration device, and said clean fluid device; wherein said controller is configured to control a cleaning process, including at least a solvent cleaning process, wherein said solvent cleaning process utilizes a solvent based cleaning fluid that differs from the claim only in the recitation of the strain based solvent vapor sensor coupled to the controller for identifying siloxane vapor, wherein the sensor comprises a piezo-resistive circuit and a sensing element coupled to the piezo-resistive circuit and including a transducer film. France further discloses the strain-based solvent based sensor ("elastomer chemi-resistor", col. 10, lines 38-47). It therefore would have been obvious to one having ordinary skill in the art to modify the device of either Oles, Takeda or Severns, to include a vapor/gas sensor as taught by France, for the purpose

Art Unit: 1746

of preventing prolong processing of the article by processing the article only for the needed time thereby realizing cost and energy effectiveness. It is also old and well known in the art to provide cleaning fluid vapor sensors to detect any leakage of the vapor into the environment, thereby preventing injury to the user and/or the environment. It is the examiner's position that, no patentable distinction is deemed to exist in the all the specific sensors as claimed and the various types of sensors as taught by France (see col. 8, line 57 thru col. 10, line 52) since France discloses that "many sensors can operate with the present invention" (col. 8, line 57). The sensors are deemed to be functional equivalence of each other (see MPEP 2144.06 SUBSTITUTING EQUIVALENTS KNOWN FOR THE SAME PURPOSE). Re claims 19 and 20, France discloses the transducer film (polymer).

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1746

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


4. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANKIE L. STINSON whose telephone number is (571) 272-1308. The examiner can normally be reached on M-F from 5:30 am to 2:00 pm and some Saturdays from approximately 5:30 am to 11:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached on (571) 272-1700. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

fls


FRANKIE L. STINSON
Primary Examiner
GROUP ART UNIT 1746